Fallbrook Public Utility District

990 East Mission Road
P.O. Box 2290
Fallbrook, California
92088-2290
(760) 728-1125
Fax (760) 728-6029
www.fpud.com

June 30, 2009

Reply to: 813 Sixth Street
Third Floor
Sacramento, CA 5814
(916) 446-7979

Via Electronic Mail & U.S. Mail

Charles R. Hoppin, Chair and members
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

ATTN: Jeanine Townsend, Clerk to the Board
commentletters@waterboards.ca.gov

SUBJECT: **Comment Letter—June 18, 2009 Draft General Permit for Landscape Irrigation Uses of Municipal Recycled Water**

Dear Chair Hoppin and Members of the Board:

The Fallbrook Public Utility District operates a small reclamation facility which contributes 400 AF/year to local supply in San Diego County. Since the distribution system consists of a small number of large users we have resisted the push to a Master Reclamation Permit. The choice to continue to operate under our original WDO now appears to have been the correct one in light of the proposed requirements which appear to be intended to limit the resource use in a time of scarcity with no public health benefit beyond the present system.

Accordingly, we join the California Association of Sanitation Agencies (CASA), WateReuse Association, and the Association of California Water Agencies (ACWA) in submitting these comments on the June 18, 2009 *Draft General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water* (General Permit). While the June 18th draft of the permit is an improvement over the previous draft, a more focused effort to review and incorporate comments, including those previously submitted by the Associations, is needed to make this permit a useful tool. Without additional changes, the Associations and their members believe that, in most cases, the existing Master Reclamation Permit (MRP) system provides a better and more streamlined system for permitting water reclamation projects. The changes we are recommending were discussed during the May 21, 2009 public meeting with State Water Board staff, yet were not addressed in this version of the permit, or they are a logical outgrowth of the revisions made to date.

In order for the General Permit to achieve the Legislature's goal of streamlining and facilitating the use of recycled water for landscape irrigation, recycled water producers and distributors need to readily see the General Permit as the best tool for permitting their project. While the draft General Permit is much improved, without further revisions to both the Permit and the Monitoring and Reporting Program (MRP), existing permit options and MRPs actually provide a better framework for encouraging recycling and the adoption of this General Permit as currently drafted could have the unintended effect of *decreasing* the use of recycled water for landscape irrigation.

B. The General Permit Continues to Mischaracterize the Requirements of Title 22 of the California Code of Regulations

The Associations and their members are committed to complying with Title 22 of the California Code of Regulations. However, there are instances throughout the permit where Title 22 is paraphrased and subtly changed resulting in a regulatory scheme inside the General Permit that differs from the uniform water recycling criteria. As we have said from the outset, it is very important that the General Permit be consistent with the uniform water recycling criteria set forth in the governing regulations, Title 22. While our strong preference is that the General Permit simply reference Title 22, at minimum, a number of provisions of the proposed draft General Permit require revision to ensure they accurately reflect Title 22. Suggested language for these sections of the General Permit is provided in the Attachment. However, given their significance, two of the inconsistencies with Title 22 are addressed here.

First, the General Permit would establish a new requirement that the California Department of Public Health (CDPH) approve use sites not included in the original Title 22 Engineering Report through amendments to the Engineering Report. (See General Permit at p. 19, Provision C.7.) If the Permit is to function effectively, the Administrator should have the authority to add new sites and include these in the annual report specified in the MRP. This approach is used in the Master Reclamation Permit process established under existing law, and has worked effectively.[1] In addition, the language should be clarified to include only amendments related to the landscape irrigation portion of an agency's recycling program.

To ensure that the process of connecting new users is not overly resources intensive and time consuming while providing the Water Board with information regarding use sites, we recommend the following revisions to Provision C.7:

> "Amendments to the approved Title 22 Engineering Report ~~(e.g. for "new use sites" not included in the approved Title 22 Engineering Report)~~ shall be approved by CDPH. The

[1] While we may have misunderstood, we believed this change was acceptable to participants in the May 21, 2009 meeting.

Administrator shall include copies of approval letter(s) prepared by CDPH regarding such amendments to the Title 22 Engineering Report in the annual report submitted to the State Water Board."

Second, the General Permit establishes new requirements for signage at recycled water sites. (General Permit at p. 14, Specification No. 12.) Given the number of languages understood by the communities served throughout California, it is not useful to require Spanish language signs in every case, when an alternate symbol or other visual can communicate the information to a broader public. Many of our members have worked to develop alternative signage that is more aesthetically pleasing and conveys the message that recycled water is in use. These alternatives should continue to be allowed under the General Permit, as authorized by Title 22, which provides that CDPH may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Department that the alternative approach will assure an equivalent degree of public notification. We recommend that the current language be replaced in its entirety with the following language that directly tracks Section 60310 (g) of Title 22:

"12. All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than four inches high by eight inches wide, that include the following wording "RECYCLED WATER – DO NOT DRINK". Each sign shall display an international symbol similar to that shown in Attachment D. CDPH may accept alternative signage and wording or an educational program provided that applicant demonstrates to CDPH that the alternative approach will assure an equivalent degree of public notification.

C. The New Requirement for Quarterly Inspections is Unnecessary, Impractical and Inspection Frequency Should Be Included in the Operations Plan.

We appreciate the State Water Board staff's willingness to revise some of the more onerous and cost-prohibitive aspects of the previous draft MRP and instead focus on the use of inspections and other management tools to ensure user compliance with the General Permit. We are very concerned, however, about the new requirement that *every use site be inspected at least quarterly.* (Page 19, Provision C.9.) This specification is poorly tailored for seasonal irrigation, particularly in northern California where irrigation is not necessary two quarters out of the year. The required frequency will make work for purveyors without providing useful information to the Administrator or the State Water Board. We urge the State Water Board to delete the quarterly inspection requirement for the following reasons:

- Some irrigation sites will have complex plumbing, high public use or other factors that might call for frequent inspections. Other sites will have sophisticated on-site managers who understand that good water management saves money, protects the environment and enhances their own reputation as good corporate citizens.

Permittees must have the flexibility to tailor their programs to respond to these distinctions, and put their resources where they will be most effective in ensuring that good irrigation management practices are both taught and employed. .

- Recycled water irrigation is a seasonal activity. For many months of the year, during the rainy season, *there is no irrigation taking place*. It does not make sense to require inspection of use sites during these periods.
- CDPH requires only annual inspections for recycled water use in buildings with dual plumbed systems. (22 CCR § 60316.) There is no justification for requiring four times as many inspections of outdoor irrigation use sites as CDPH requires for indoor uses.

For these reasons we recommend the following revisions:

The Administrator shall ensure that periodic inspections are conducted ~~at least quarterly~~ of the Use Areas they supply at a frequency approved by CDPH, including an adaptive approach to address sites with a record of compliance concerns. The Administrator shall also ~~and~~ establish procedures to monitor and assure compliance with conditions of this General Permit and ~~The Administrator shall also~~ ensure that regular inspections occur to assure cross -connections with potable water systems are not made and that backflow prevention devices are installed and operable.

D. The Monitoring and Reporting Requirements for Salinity and Nitrogen Remain Problematic.

State Water Board staff have made a concerted effort to improve the MRP, and the June 18, 2009 draft includes several important changes. The associations strongly support the deletion of the log book requirement and the change in reporting frequency to annual for several parameters. We also support the concept that the General Permit provide a framework for encouraging water recyclers to report on the salinity and nutrient loading that ***their*** projects contribute to a basin. This is consistent with the Recycled Water Policy. The Associations will support an MRP which includes ***annual*** reporting of the salt and nutrient loading from recycled water in a groundwater basin because this information is ***useful*** to local agencies working to develop local management plans.

However, the MRP continues to contain overly prescriptive measures with regard to salt and nutrient loading reporting. *For each use site*, end users and producers/distributors must keep track of all fertilizer applied and calculate the nutrient-loading rate monthly. Similarly, the MRP would require monthly calculation of salinity application rates, including "salinity characteristics of any additional sources of salinity" over which the recycled water supplier has no control. These requirements do not give credence to the fact that salt and nutrient loading are a long-term cumulative, basin-wide issues and deviate from the Recycled Water Policy's clear direction that recycled water purveyors are ***not*** required to assume responsibility for every nutrient and salinity

load in a basin. The Associations support the acquisition of useful, long-term data on salts and nutrients and believe is it is appropriate for our members to describe ***their*** contributions under the permit, but not the contributions of others.

Under the approach developed in the May 21 meeting, the program Administrator would annually report to the Water Board on both the amount of water applied and the salt and nutrient content of the recycled water delivered for landscape irrigation. Annual reporting is appropriate since the nutrient content in recycled water rarely differs. The May 21 meeting approach would also require annual reporting of the amount of recycled water applied basin-wide rather than by each individual use site. The producer/distributor would be responsible to ensure that users apply recycled water at an agronomic rate, and to take into account fertilizer use and other nutrient information as part of the periodic inspections required under Provision C.9. The producer/distributor would determine what a user's theoretical application rate should be based on the site characteristics and compare that to the user's actual recycled water application rate. If the theoretical and actual rates significantly differ, the producer/distributor must address the potential problem with the user.

To ensure that the MRP generates useful information commensurate with the burden and cost of compiling the data, we urge the State Water Board to revise page 1 of the MRP as follows (for ease of review, we have shown the proposed language as it would appear in the MRP, omitting the underline/strike through of the various versions):

RECYCLED WATER PRODUCTION AND USE

* * * *

Recycled water quality characteristics, based on data included in the monthly reports provided by the Producer to the Regional Water Board, shall be used in calculations to ascertain loading rates. For basins where a Regional Water Quality Control Board has not adopted a Salt and Nutrient Management Plan, the Administrator shall monitor recycled water production, distribution, and use within its service are for each respective basin/sub-basin for the following parameters:

Parameter	Units	Sample Type	Frequency	
			Sampling	Reporting
Volume of recycled water	acre-feet	Varies[2]	Monthly[3]	Annual
Total number of use areas/basin	- -	Observation	Annual	Annual
Total area of application	acres	Observation	Annual	Annual
Nitrogen application rate[4 5]	lbs/acre/	Calculated	Annual	Annual

[2] May be estimated based on daily percentage of recycled water supplied via a non-potable water supply system.
[3] May be estimated based on available data (e.g., meters read every other month or quarterly).

	month			
Salinity application rate[6]	lbs/acre/ month	Varies	Annual	Annual

E. Additional Revisions to the General Permit are Needed to Ensure Consistency with the State Water Board's View of Recycled Water as a Valuable Water Supply.

We greatly appreciate the revisions that have already been made to address our concerns that the General Permit language characterizes recycled water as a waste to be avoided rather than a valuable resource. Despite a number of helpful revisions made to date, the tone of the General Permit remains discouraging. The State Water Board has previously declared its support for water recycling. The recently adopted Recycled Water Policy states that the Water Boards:

> "*will exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with state and federal water quality laws.*"

We urge the Water Board to ensure that the findings section of the General Permit make it clear that the Legislature has directed the Water Board to adopt a streamlined general permit for landscape irrigation and the Water Board's own policies also encourage this action. In addition, the Permit should emphasize that the Water Board and California Department of Public Health (CDPH) have developed policies and regulations to assure that recycled water is properly treated, safe, and used in a way that is protective of both human health and water quality.

These simple findings set the stage for the General Permit and make it clear that the Water Board truly believes that recycled water use should be encouraged. Further changes to the General Permit in this regard are also needed, as detailed in the Attachment.

Thank you for the opportunity to work with the State Water Board on this General Permit. With the additional changes recommended in this letter, we are hopeful that the General Permit may prove to be a useful tool in aiding the State in achieving its ambitious recycling goals. If you have any questions regarding our comments, please contact Dave Smith at (707) 237-6992 (dsmith@watereuse.org), Bobbi Larson at (916) 446-7979 (blarson@somachlaw.com) or David Bolland at (916) 441-4545 (DaveB@acwa.com).

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[4] Nitrogen application rate shall consider nutrients contained in the recycled water, based on monthly analytical data provided by the Producer to the Regional Water Board.
[5] Nitrogen concentrations shall be calculated and reported "as N." For example, nitrate-nitrogen = 27 mg/L of (as NO_3) shall be converted and reported as nitrate-nitrogen = 6 mg/L (as N).
[6] Salinity application rate shall consider TDS or EC in the recycled water, based on monthly analytical data provided by the Producer to the Regional Water Board.

Sincerely,

Jos. F. Jackson
Chief Engineer
Fallbrook Public Utility District

ATTACHMENT
Comment Letter Regarding
June 18, 2009 Draft General Permit
For Irrigation Uses of Recycled Water

ACWA/CASA/WateReuse

I. FINDINGS

Finding 12, Page 4:

As currently worded, this finding suggests that local health officers may establish different or additional requirements for cross connection control. Under Health and Safety Code Section 116805, local health officers are authorized to enforce the uniform standards developed by CDPH.

Proposed Language change:

12. To protect public health from risks associated with potential cross-connection and subsequent contamination of potable water systems, California Health and Safety Code section 116555 requires that a public water system shall ensure that the system will not be subject to backflow under normal operating conditions. Section 116800 et. seq. authorizes local health officers to maintain a program for the control of cross-connections by water users, where public exposure to drinking water contaminated by backflow may occur. Cross-connection programs are to be conducted in accordance with backflow prevention regulations adopted by CDPH and may require water users to comply with ~~all~~ orders, instructions, regulations, and notices from the local health officer with respect to the installation, testing, and maintenance of backflow prevention devices.

II. PROHIBITIONS

Prohibition 10, Page 13:

Prohibition 10 seems to foreclose indefinitely the use of facilities (e.g., pumps or tanks) previously operated for recycled water systems to convey potable water. This requirement is unnecessary. Instead, the General Permit could prohibit interchangeable uses.

III.SPECIFICATIONS

Recycled Water Application

Specifications 4-5, Page 14:

Specification 4 refers to application of "waste constituents" at agronomic rates. The use of this terminology is not consistent with characterization of recycled water as a resource, the use of which is encouraged. The Recycled water Policy adopted by the State Water Board uses

the terminology "[a]pplication in amounts and at rates as needed for the landscape" and does not refer to "waste constituents. In addition, Specification 5 is duplicative of Specification 4 and should be deleted.

Proposed Language Change:

4. Application of ~~waste constituents~~ recycled water to the Use Area shall be at reasonable agronomic rates and shall consider soil, climate, and nutrient demand. Application rates shall ensure that a nuisance is not created. Degradation of groundwater, considering soil, climate, and nutrient demand, shall be minimized consistent with applicable provisions of the Recycled Water Policy.
~~5. The seasonal nutritive loading of the Use Area including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed the nutritive demand of the landscape.~~

Specification 6, Page 14:

This specification would require irrigation of sites with public access to occur during evening hours. However, this is inconsistent with Title 22, which includes no such restriction. We recommend that this specification be deleted.

Recycled Water Utilities, Equipment, Signage, and Use Areas

Specifications 7 and 9, Page 14:

The General Permit would require all equipment, including pipes, to be marked with purple tape, stickers, etc, to clearly distinguish the recycled water facilities from potable facilities. In addition, the Permit would require a specified separation between potable water and recycled water pipelines. While this is appropriate for new systems, it is problematic for retrofits where pipes may be buried and not easily accessible.

Proposed Language Change:

7. All newly installed reclamation equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. All newly installed reclamation distribution system piping shall be purple or adequately identified with purple tape, tags, or stickers per Section 116815(a) of the California Health and Safety Code.

* * *

9. A 4-foot horizontal and 1-foot vertical separation shall be maintained between all new pipelines transporting recycled water and those transporting domestic water, unless approved by CDPH. Domestic water pipelines shall be configured above recycled water pipelines unless approved by CDPH.

Specification 11, Page 14:

The requirement that the main shutoff valve be "downstream" of the meter is confusing, given that systems may be configured differently.

Proposed Language Change:

11. The main shutoff valve ~~downstream~~ of the recycled water meter shall be tagged with a recycled water warning sign. The valve shall be equipped with an appropriate locking device to prevent unauthorized operation of the valve.

Specification 14, p. 15:

As drafted, this specification is overly broad. It is neither feasible nor necessary to "protect" all workers, including those who maintain and operate the recycled water irrigation system, from contact with recycled water that has been approved for full body contact by CDPH. This specification should be deleted, as it is inconsistent with Title 22. The preceding specification 13 provides the appropriate protection for eating areas and food handling facilities.

Specification 16, p. 15:

The use of the term "airborne" has connotations of disease and contamination. We recommend replacing the phrase "airborne spray" with "overspray."

Proposed Language Change:

16. Recycled water shall not be allowed to escape from the Use Area by ~~airborne~~ overspray or by surface flow except in minor amounts such as that associated with BMPs for good irrigation practices.

III. PROVISIONS

Operations and Maintenance Plan

Provision C. 5(b), p. 17:

While we do not object to the development of the Irrigation Management Plan, we recommend additional clarifying changes to assist in implementation.

Proposed Language Changes:

An Irrigation Management Plan. The Irrigation Management Plan shall include measures to ensure the use of recycled water occurs at an agronomic rate while employing practices to ensure irrigation efficiency necessary to minimize application of salinity constituents (by mass) to Recycled Water Use Areas. The Irrigation Management Plan shall be applicable for each Recycled Water Use Area served and shall account for the following:
~~i.~~ ~~S~~soil characteristics in the service area; ~~ii. R~~recycled water characteristics (nutrients, including nitrogen and phosphorous content; specific ion toxicity, including chloride, boron, sodium, bicarbonate; and other parameters); ~~iii. R~~ general requirements of the major plant species being irrigated (e.g., seasonal demand, climate, nutrient requirements~~); iv. C~~ climatic conditions~~;~~ (e.g., precipitation, evapotranspiration rate, wind); ~~v. O~~other supplemental nutrient additions (e.g., chemical fertilizers) commonly used ~~in the operation of~~ for the type of ~~the~~ Use Area; and ~~vi. M~~ management of impoundments used to store or collect recycled water.

Provision C. 5(f), p. 18

We support the addition of Recycled Water Use Supervisor Training requirements. However, we are concerned that the use of the phrase "continuing education" suggests a formalized certification-type program involving the assignment of continuing education units (CEUs). While some of our members have implemented formalized CEU based programs, there are other effective training programs that should also be allowed under the General Permit.

Proposed Language Change:

Recycled Water Use Supervisor responsibilities and training.
i. Documentation of examples from a training program including ~~continuing~~ periodic education for Recycled Water Use Supervisors. At a minimum, such training programs shall include the following elements:

Provision C.9, p.19

The language regarding the separation of potable and recycled water supplies is unclear. We recommend the following revisions to Provision C.9:

Proposed Language Change:

The Administrator shall also ensure that regular inspections occur to assure cross-connections with potable water systems are not made, ~~and~~ that an air-gap exists between the potable and recycled water supplies, and that reduced pressure backflow devices are installed and operable on the potable water system, where applicable.

Provision C. 16, p. 20

As noted in our previous comment letter, the requirement that notification of recycled water spills be provided to the Office of Emergency Services, or its successor agency, California Emergency Management Agency, is contrary to statute, which provides only for notification of the Regional Water Boards. (Water Code section 13529.2.)

Proposed Language Change:

16. The Administrator shall report any noncompliance that may endanger human health or the environment. The Producer or Distributor shall immediately report orally, or electronically if available, information of the noncompliance as soon as (1) the Producer or Distributor has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, to the appropriate regional water board office ~~and the California Emergency Management Agency at 1-800-852-7550~~.

Monitoring and Reporting Program

Page 3

The requirement that the Administrator obtain specified information from users on an annual basis is unnecessary. The MRP should simple specify the information required in the Administrator's annual report and allow the Administrator to obtain the relevant information from users in any appropriate manner.

Proposed Language Change:

~~**By the 15 of March of each year**, the Administrator shall obtain an annual report for each respective Use Area of the information as required in the above monitoring schedule for the previous calendar year. If any parameter or constituent is monitored more frequently than is required by this General Permit, the results of such monitoring shall be included in the monitoring report.~~